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EXAMINER	
DO, ANH HONG	
ART UNIT	PAPER NUMBER
2624	9

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/351,930	Iourcha et al.
Examiner	**Art Unit**
Anh Hong Do	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-7, 13, 15, 16, and 21-56* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *37-45 and 56* is/are allowed.

6) ☒ Claim(s) *1-7, 13, 15, 16, 21-36, and 46-55* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Drawings

1. The proposed drawing amendment to Fig. 4B that the applicant mentioned in the Preliminary Amendment filed 8/27/1999 has not been received. The applicant is suggested to submit it for an approval.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-7, 13, 15, 16, 21 and 22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 5,956,431. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are directed towards the same subject matter.

Comparing claim 1 of the present application with claim 1 of Patent No. 5,956,431:

Claim 1 of the present application recites: A system for encoding an image, comprising: (claim 1 of the Patent: In an image processing system, a system for encoding an image, comprising:); an image decomposer, coupled to receive an image, for breaking the image into one or more image blocks, each image block having a set of colors (claim 1 of the Patent: an image decomposer, coupled to receive an image, for breaking the image into one or more image blocks); at least one block encoder for receiving each image block and for compressing each image block to generate an encoded image block, wherein each block encoder includes a color quantizer for receiving each image block and for generating at least one codeword from which at least one quantized color is derived, the color quantizer having a selection module for computing a set of parameters from the set of colors, the at least one codeword derived from the set of parameters; and (claim 1 of the Patent: at least one block encoder, each block encoder coupled to the image decomposer, for compressing each image block to generate an encoded image block, wherein

each block encoder includes a color quantizer, coupled to receive an image block identifiable as a block type, for generating a first and a second codeword from which at least one quantized color is derived, the color quantizer comprising a curve selection module, coupled to the block type, for computing the optimal analog curve for the block type, the first codeword and the second codeword derived from the analog curve); an encoded image composer for receiving and ordering the encoded image blocks into a data file (claim 1 of the Patent: an encoded image composer, coupled to each block encoder, for ordering the encoded image blocks into a data file).

In the above comparison, the only substantial difference between claim 1 of the present application and claim 1 of the Patent is "computing a set of parameters from the set of colors". In the Patent, the analog curve is computed instead and the codewords are derived from it. The difference is merely a specific label of "parameters" and it does not make claim 1 of the present application patentably distinguishable over claim 1 of the Patent as long as the codeword is successfully derived.

Moreover, although claim 1 in the instant application defines the invention more precisely than claim 1 in the Patent (i.e., the image is specified as a color image), however it is not patentably distinguishable from claim 1 in the Patent. In re White et al., 160 USPQ 417, In re Thorington et al., 163 USPQ 644.

Claim 2 of the present application is similar to claim 2 of the Patent.

Claim 3 of the present application is similar to claim 3 of the Patent.

Claim 4 of the present application is similar to claim 4 of the Patent.

Comparing claim 5 of the present application with claim 5 of Patent No. 5,956,431:

Claim 5 of the present application recites: A system for decoding a compressed image, comprising: (claim 5 of the Patent: In an image processing system, a system for decoding a compressed image, comprising:); an encoded image decomposer, coupled to receive an image data file having at least one compressed image block, for breaking the encoded image data file into individual compressed image blocks, each compressed image block having at least one associated codeword, each codeword generated by computing a set of parameters, partitioning the set of parameters into a plurality of partitions, and computing each codeword from one of the partitions (claim 5 of the Patent: an encoded image decomposer, coupled to receive an image data file having at least one compressed image block, for breaking the encoded image data file into individual compressed image blocks, each compressed image block having at least one associated codeword, each codeword generated through selecting a block type for an original image block comprising the compressed image block, computing an analog curve for the block type, selecting a partition along the analog curve for the computed analog curve, and computing the set of codewords for the partition); at least one block decoder for decompressing the compressed image blocks into decompressed image block (claim 5 of the Patent: at least one block decoder, coupled to the encoded image decomposer, for decompressing the compressed image blocks, and); an image composer for ordering the decompressed image blocks in an output file (claim 5 of the Patent: an image composer, coupled to each block decoder, for ordering the decompressed image blocks in an output file).

In the above comparison, the only substantial difference between claim 5 of the present application and claim 5 of the Patent is "computing a set of parameters". In the Patent, the analog curve is computed instead and the codewords are derived from it. The difference is merely a specific label of "parameters" and it does not make claim 5 of the present application patentably distinguishable over claim 5 of the Patent as long as the codeword is successfully derived.

Claim 6 of the present application is similar to claim 6 of the Patent.

Claim 7 of the present application is similar to claim 7 of the Patent.

Comparing claim 13 of the present application with claim 13 of Patent No. 5,956,431:

Claim 13 of the present application recites: A method for generating an encoded image of an original image having a header, comprising: (claim 13 of the Patent: In an image processing system, a method for generating an encoded image of an original image having a header, comprising:); converting the header to a modified header (claim 13 of the Patent: converting the header to a modified header); decomposing the original image into image blocks, each image block having a set of colors (claim 13 of the Patent: decomposing the original image into image blocks); encoding each image block to generate an encoded image block for each image block by computing a set of codewords from the set of colors, computing a set of computed colors using the set of codewords, and mapping each original color to one of the computed colors or one of the codewords to produce an index for each original color (claim 13 of the Patent: encoding each image block to generate an encoded image block for each image block, including selecting a set of codewords, the set having at least one codeword, for representing a property value for an image

block selecting at least one block type, the selecting the set of codewords further including computing an optimal analog curve for each selected block type, selecting at least one partition along the analog curve for each computed analog curve, and computing a set of codewords for each selected partition); composing the modified header and each encoded image block in a file to generate the encoded image (claim 13 of the Patent: composing the modified header and each encoded image block in a file to generate the encoded image).

In the above comparison, the only substantial difference between claim 13 of the present application and claim 13 of the Patent is "mapping each original color to one of the computed colors or one of the codewords to produce an index for each original color".

Although claim 13 in the instant application defines the invention more precisely than claim 13 in the Patent (i.e., the image is specified as a color image and mapping each original color to one codeword to produce an index for each original color), however it is not patentably distinguishable from claim 13 in the Patent. In re White et al., 160 USPQ 417, In re Thorington et al., 163 USPQ 644.

Claim 15 of the present application is similar to the combination of claims 13 and 15 of the Patent.

Claim 16 of the present application is similar to the combination of claims 16 and 17 of the Patent.

Claim 21 of the present application is similar to claim 21 of the Patent.

Claim 22 of the present application is similar to claim 22 of the Patent.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 23, 24, 46-51 and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (U.S. Patent No. 5,748,904).

Regarding claims 23, 24, 46-51 and 55, Huang discloses:

- computing a set of codewords from the set of original colors (col. 3, lines 52-53, wherein the color image is disclosed in col. 5, lines 48-51);

- computing a set of computed colors using the set of codewords (col. 3, lines 53-55, wherein the color image is disclosed in col. 5, lines 48-51);

- mapping each original color to one of the computed colors to produce an index for each original color (Figs. 10 or 11).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 25-36 and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (U.S. Patent No. 5,748,904) in view of Normile et al. (U.S. Patent no. 5,822,465).

Regarding claims 25-30, although teaching as in claims 23 and 24, Huang does not specifically mention about the color space and selecting a set of parameters in the selected color space. One skilled in the at would have clearly recognized that the color bitmap in Huang the color data is encoded to improve the compression ratio and increase the efficiency of the graphic system (col. 6, lines 1-4) so as to enhance the image quality.

Normile, in the same filed of endeavor, teaches:

- the set of original color is defined according to a selected color space RGB (col. 11, lines 13-15);

- computing a set of computed colors includes using the set of codewords to select a set of parameters in the selected color space from which the set of computed colors maybe obtained (col. 11, lines 27-34);

wherein the system of Normile is to improve the color image quality (col. 5, lines 43-48).

Therefore, it would have been obvious to define the set of original colors according to the color space and to use the set of codewords to select a set of parameters in the color space in Huang as taught by Normile in order to enhance the color image quality.

Regarding claim 31, Huang teaches associating additional information with at least one defined index (Figs. 10 or 11).

Regarding claims 32 and 54, Huang teaches a transparency identifier (col. 5, lines 58-65).

Regarding claims 33 and 52, Normile teaches mapping an alpha value associated with the original color image (col. 19, lines 39-41).

Regarding claims 34 and 53, Huang teaches a color key value (col. 5, lines 48-51).

Regarding claim 35, Normile teaches a block type header for associating a block type with the original image (Fig. 14: 1401).

Regarding claim 36, Huang teaches the indices produced in mapping of the set of original colors and the set of codewords (Figs. 10 or 11).

Allowable Subject Matter

8. Claims 37-45 and 56 allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding independent claim 37, the prior art, taken either singly or in combination, does not teach:

- fitting a geometric element to the first set of color points so that the geometric element includes a second set of color points having a minimal moment of inertia when fitted to the center of gravity of the first set of color points;

- computing a set of codewords from the second set of color points;

- using the indices by the mapping each of the first set of color points and the set of codewords to represent the first set of color points.

Regarding independent claim 42, the prior art, taken either singly or in combination, does not teach:

- fitting a geometric element to the first set of color point parameters associated with the block of pixel parameters so that the geometric element includes a subset of color point parameters having a minimal moment of inertia when fitted to the center of gravity;

- computing a set of codewords from the subset of color point parameters;

- representing the block of pixel parameters by using the set of codewords, and the block type, and each index produced by mapping.

Regarding independent claim 56, the prior art, taken either singly or in combination, does not teach:

- fitting a geometric element to the original colors so that the geometric element includes a set of colors having a minimal moment of inertia when fitted to the center of gravity of the original colors;

- computing a set of codewords from the set of colors;

- generating the bitmap table by mapping each original color to one of the at least three different colors.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Hong Do whose telephone number is (703) 308-6720.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700 or 4750. The fax phone number for this Group is (703) 872-9314.

September 6, 2002.